

An electrodynamic integration ...

0/112/02/001/005/03/0
0201/0303

mass, m_2 - the mass of the coil) and a finite value of γ , the frequency response in this band becomes a straight line, parallel to the abscissa as it is in a displacement pick-up. For $\gamma \rightarrow \infty$ at higher frequencies the frequency response is distorted, owing to the effect of m_2 . The following optimum values of parameters are recommended: $\alpha = 0.5$, $\beta = 0.001$; $\gamma = 1.5$ (γ is limiting in the presence of a stiff link k_2). The above values correspond to a flat frequency characteristic of the pick-up shifted towards low frequency as much as possible. Good damping of free oscillations of the pick-up is obtained from the current flowing in the measuring circuit. There are 3 figures and 2 Soviet-bloc references.

Card 2/2

S/194/61/000/010/021/082
D222/D301

AUTHOR: Pikulev, N.A.

TITLE: Some problems in the electrical modelling of the passage through resonance of vibration-isolated machines or foundations

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 10, 1961, 17, abstract 10 B109 (Tr. Tsentr. n.-i. in-ta stroit. konstruksii. Akad. str-va i arkhitekt. SSSR, 1961, no. 1, 104-115)

TEXT: The specific conditions of constructing electrical models for mechanical oscillatory systems under the influence of forces of changing frequency and amplitude are considered. Some analogue devices are described which can be used in building analogues for the study of phenomena taking place when a vibrator-isolated machine or foundation goes through resonance. 8 figures. 10 references. [Abstracter's note: Complete translation]

Card 1/1

PIKULEV, N. A., Cand Tech Sci -- (diss) "Work of vibration insulation under conditions of starting and stopping of machines. Methods of decreasing resonance vibrations." Moscow-Sverdlovsk, 1960. 20 pp; (Academy of Construction and Architecture USSR, Central Scientific Research Inst of Construction Structures, Scientific Research Inst of Industrial Buildings and Installations, Laboratory of Dynamics); 120 copies; price not given; (KL, 17-60, 158)

PIKULEV, N.A. (gor.Perovo)

Role of elastic pieces inserted between dampers and the vibrating
body. Stroimekh. i rasch.soor. 1 no.2:45-48 '59.

(MIRA 12:4)

(Machinery--Vibration) (Damping (Mechanics))

PIKULEV, N. A.

Device for Simultaneous Recording of Several Processes on the Screen
of Electron Oscillograph. Patent, Class 21e, 28₀₂. No 103718;
Elektrosvyaz' No 1, Jan 57.

PIKULEV, N.A., inzh.

Oscillations of vibrating screens caused by starting and stopping.
Stroi. i dor. mashinostr. 4 no. 5:20-23 My '59. (MIRA 12:7)
(Vibrators) (Road machinery)

PIKULEV, N.A., inzh.

Reducing vibrations of buildings. Masl.-zhir.prom. 25 no.10:
45-46 '59. (MIRA 13:2)

1. Nauchno-issledovatel'skiy institut promzdaniy i sooruzheniy
Akademii stroitel'stva i arkhitektury SSSR.
(Buildings--Vibration) (Compressors)

PIKULEVA, V.A.

Food of *Hemibarbus maculatus* Bleek. and *Hemibarbus labeo* Pall.
in the Amur Basin. Mat. k pozn. fauny i flory SSSR. Otd. zool.
no. 32:419-434 '52. (MIRA 11:4)

1. Laboratoriya ikhtiologii Moskovskogo gosudarstvennogo universi-
teta.

(Amur Valley--Carp) (Fishes--Food)

PIKULEVA, Yu.V., kand.med.nauk

Reactive changes in the organism in osseous tuberculosis during morbid and healing processes [with summary in French]. Probl.tub. 37 no.1:27-31 '59. (MIRA 12:2)

1. Iz Instituta tuberkuleza AMN SSSR (dir. Z.A. Lebedeva; zav. klini-
koy kostnosustavnogo tuberkuleza imeni T.P. Krasnobayeva - prof.
Z.Yu. Rol'ye).

(TUBERCULOSIS, OSTEOARTICULAR, immunol.
phagocytosis in morbid & healing processes (Rus))
(PHAGOCYTOSIS, in var. dis.
tuberc. osteoarticular, during morbid & healing
processes (Rus))

NIKOL'SKIY, G.V.; PIKULEVA, V.A.

Adaptive significance of the amplitude of variability of specific characters and properties of the organism [with summary in English].
Zool. zhur. 37 no.7:972-988 J1 '58. (MIRA 11:8)

1. laboratoriya ikhtiologii Moskovskogo gosudarstvennogo universiteta.

(Adaptation (Biology)) (Fishes--Food)

PIKULEVA, V.A.

Nutrition of *Pseudobagrus fulvidraco* Rich. and *Idocassis brashnikovi*
Berg. in the Amur Basin. Mat. k pozn fauny i flory SSSR. Otd. zool.
no.32:435-448 '52. (MIRA 11:4)

1. Laboratoriya ikhtiologii Moskovskogo gosudarstvennogo universiteta.
(Amur Valley—Catfishes) (Fishes—Food)

NIKOL'SKIY, G.V.; GROMCHEVSKAYA, N.A.; MOROZOVA, G.I.; PIKULEVA, V.A.

Fishes of the upper Pechora basin. Mat.k pozn.fauny i flory SSSR.Otd.
zool.no.6:5-202 '47. (MIRA 9:9)

(Pechora River--Fishes)

PIKULEVA, Yu.V.

Dystrophic changes in tissues in tuberculous coxitis in children
[with summary in French]. Probl.tub. 36 no.3:47-53 '58 (MIRA 11:5)

1. Iz kliniki kostno-sustavnogo tuverkuleza imeni T.P. Kraenobayeva
(zav. - prof. Z.Yu. Rol'ye) Instituta tuberkuleza AMN SSSR (Dir.
Z.A. Lebedeva)

(TUBERCULOSIS, OSTEOARTICULAR, in inf. & child
dystrophic changes in tissues in coxitis (Rus))

PIKOLOVA, Yu.V., kandidat meditsinskikh nauk

"Pedagogy in osteotubercular sanatoria for children" by V.A. Lebedeva.

Reviewed by I.U.V. PIKOLOVA. Probl.tub. 35 no. 10:119-121 '67.

(TUBERCULAR S--HOSPITALS AND SANATORIUMS) (M. A. 10.10)

(PHYSICALLY HANDICAPPED CHILDREN--EDUCATION)

(LEBEDEVA, V.A.)

PIKULEVA, Yu.V., kand. med. nauk

Experience in the use of steroid hormones in children with various forms of osteoarticular tuberculosis. Probl. tub. no.4:61-66 '64. (MIRA 18:11)

1. Otdeleniye kostno-sustavnogo tuberkuleza imeni T.P. Krasnobayeva (zav. - prof. Z.Yu. Rol'ye) Tsentral'nogo instituta tuberkuleza (direktor - deystvitel'nyy chlen AMN SSSR prof. N.A. Shmelev) Ministerstva zd.avookhraneniya SSSR, Moskva.

PIKULEVA, Yu.V., kand.med.nauk

Case of a typical tubercular process in the hip joint. Probl.
tub. no.8.107-109'62. (MIRA 16:9)

1. Iz kliniki kostno-sustavnogo tuberkuleza imeni T.P.
Krasnobayeva (zav. klinikoy - prof. Z.Yu.Kol'ye).
(HIP JOINT—TUBERCULOSIS)

RUSSIA, Vol. 1.

"Dystrophic Changes in the Tissues of the Tuberculous Lungs in Children." *Soviet Med. Biol.*, April 1961, Moscow, U.S.S.R. (12, 1, 21, Jan 61)

DO: Sov. J. Med. 22 Sep 61 Survey of Scientific and Technical Dissertations Defended in USSR Higher Educational Institutions (1)

PIKULEVICH, L.D.

Soil heaving in the region of the Bratsk Hydroelectric Power
Station. Merzl. issl. no.3:131-157 '63.

Stages in freezing processes and the variation of moisture
in seasonally frozen ground. Ibid. 158-168 (MIRA 17.1)

PIKULEVICH, L.D.

Studies of frozen-ground for purposes of engineering-geology in
connection with the construction of the Bratsk Hydroelectric Power
Station. Mersl.issl. no.2:189-197 '61. (MIRA 16:5)

(Bratsk Hydroelectric Power Station--Frozen ground)

(Bratsk Hydroelectric Power Station--Engineering geology)

PIKULIK, Alojz, inz.

Developing the rescue service in the mines of Slovakia. Uhlí
5 no.1:26 Ja '63. Uhlí 5 no.1:26 Ja '63.

1. Hlavní báňská záchranná stanice, Handlova.

ACCESSION NR: AP4043007

S/0051/64/017/002/0209/0212

AUTHORS: Gladchenko, L. F.; Pikulik, L. G.; Belosarevich, M. L.

TITLE: Study of electron spectra of a series of aromatic molecules in solutions

SOURCE: Optika i spektroskopiya, v. 17, no. 2, 1964, 209-212

TOPIC TAGS: aromatic compound spectrum, electron transition, luminescence, fluorescence, phthalimide, benzene

ABSTRACT: In order to obtain a more reliable determination of the characteristic electron-vibration frequencies in each spectral band, and to trace their variation from compound to compound, the absorption spectra of benzene, toluol, benzoic acid, phthalic acid, phthalic anhydride, and phthalimide were measured at low temperatures using solvents that either vitrify or crystallize upon cooling (ethyl alcohol and dioxane, respectively). Analysis of the data shows that each of the spectra of all the substances contain funda-

1/2

1. KUMAR, L. G.

21
The spectral relation to fluorescence yields ϕ_f and the position of the max. in the spectrum is discussed for a no. of org. compds. It was shown that the relative position of the excited and ground levels is of major importance in quenching fluorescence. It was proposed that there are two processes for the non-radiant inactivation. The first process, for which the probability of its occurrence increases as the spectrum is displaced toward higher wave lengths, is identified with intramol. temp. quenching. The second process is ascribed to a transition of the excited mols. into the metastable state.

L. Koyler Leach

Sp
rye

PIKULIK, L.G.

5
7
444j
Investigation of the property of complex organic molecules
to fluoresce and to phosphoresce. V. V. Zelinskii, B. I. Buzin,
V. P. Kolobkov, and L. G. Pikulik. Bull. Acad.
Sci. U.S.S.R., Phys. Ser. 20, 1046 (1956) (English trans-
lation).—See C.A. 51, 1737f. B. M. K.

Pikulik, L. G.
USSR/Physical Chemistry - Molecules. Chemical Bonds.

B-4

Abs Jour: Ref Zhur-Khimiya, No 5, 1957, 14384

Author : V. V. Zelinskiy, N. P. Emets, V. P. Kolobkov, L. G.
Pikulik

Inst : -
Title : Investigation of the capacity of complex organic molecules to fluoresce and phosphoresce

Orig Pub: Izv. AN SSSR, ser. fiz, 1956, 20, No 5, 507-513

Abstract: An investigation was made of the dependence of the probability of non-radiating transitions of excited molecules (from the unstable level to the metastable level r , from the unstable to the basic without q radiation, from the metastable to the basic with π radiation, and from metastable to the basic without radiation q_2) on the temperature, solvent and molecule structure. Probability of r is apparently only weakly dependent on temperature. Probability q_2 changes little with temperature for some organic compounds while for

Card 1/2

Phthalimide
AUTHORS: Zelinskiy, V.V., Kolobkov, V.P. and Pikulik, L.G.

51-3-23/24
TITLE: Dependence of the fluorescence and absorption spectra on the solvent for certain phthalimide derivatives.
(Zavisimost' spektrov fluorestsentsii i pogloshcheniya ot rastvoritelya u nekotorykh proizvodnykh ftalimida).

PERIODICAL: "Optika i Spektroskopiya" (Optics and Spectroscopy), 1957, Vol.2, No.3, pp.402-405 (U.S.S.R.)

ABSTRACT: The effect of the solvent on the fluorescence and absorption spectra of phthalimide derivatives consists of a displacement of the spectral band without alteration of its shape. This paper presents experimental results at room temperature for the 4-derivates (8 compounds such as 4-aminophthalimide), 3-derivatives (12 compounds such as 3-acetylamino-N-methylphthalimide) and 3,6-derivates (10 compounds such as 3,6-diacetylamino-N-methylphthalimide) of phthalimide. The maximum frequency of fluorescence or absorption is plotted against the solvent (23 solvents were used, e.g. water, glycerin, methanol, pyridine, acetone, CCl₄, etc). The solvents are given places on the abscissa in such a way that distances are proportional to the spectral displacement produced by that particular solvent on a standard substance which is 4-amino-N-methylphthalimide. For the fluorescence

Card 1/2

Dependence of the fluorescence and absorption spectra on the solvent for certain phthalimide derivatives. (Cont.)
spectral displacement sets of straight lines are obtained, ^{51-3-23/24}
for the absorption spectra the dependence is more complex. The effect of the solvent could not be correlated with its dielectric constant or its dipole moment and further work, e.g. on variation of the spectral displacement with temperature, is suggested.
There are 3 figures and 8 references, 7 of which are Slavic.

SUBMITTED: October 22, 1956.

AVAILABLE:

Card 2/2

Pikulik, L.G.

AUTHORS: Zelinskiy, V.V., Kolobkov, V.P. and Pikulik, L.G. 51-3-24/24

TITLE: An attempt at construction of a unidimensional model of potential curves for certain derivatives of phthalimide.
(Popytka postroyeniya odnomernoy modeli potentsial'nykh krivyykh dlya nekotorykh proizvodnykh ftalimida).

PERIODICAL: "Optika i Spektroskopiya" (Optics and Spectroscopy), 1957, Vol.2, No.3, pp. 405-408 (U.S.S.R.)

ABSTRACT: Starting from the absorption and fluorescence spectra, the authors construct unidimensional potentials for complex molecules. It is assumed that electron transitions do not violate the Franck-Condon principle. The transitions from various points of a potential curve are taken to be equally probable. The distribution of molecules in various vibration levels at a given temperature is taken to be the same for different molecules and for both the ground and excited states. The method of construction of these potentials is described and potential curves are shown for the ground and excited states of 4-amino-N-methylphthalimide solutions in methyl alcohol and pyridine, and of 3,6-diacetylamino-N-methylphthalimide solutions in ethyl alcohol and benzene. When the absorption and fluorescence spectra are mirror-symmetrical, the potentials for the ground and excited states are identical,

Card 1/2

Pikulik, L.G.

51-5-24/26

AUTHOR: Pikulik, L.G.
 TITLE: On the Effect of a Solvent on the Luminescence Yield.
 (O vliyani rastvoritelya na vykhod fluorestsentsii)

PERIODICAL: Optika i Spektroskopiya, 1957, Vol.2, No. 5,
pp. 676 - 678 (USSR)

ABSTRACT: To study the effect of a solvent on the quantum yield of fluorescence, the yield of vapour and solution should be measured at the same temperature. The author uses glycerin (which boils at 280°C) as a solvent. The experiment shows that on variation of temperature of the solutions of phthalimides in glycerin from 20 - 270°C, both a displacement of fluorescent spectrum and change in the quantum yield occur. For 3-amino-phthalimide (Fig.1), the displacement in the short-wavelength direction is 900 cm⁻¹, for 3-monomethylaminophthalimide (Fig.2), the displacement is 800 cm⁻¹. At the same time, the band widens; in Fig.1, from 3600 to 4250 cm⁻¹; in Fig.2, from 4200 to 4700 cm⁻¹. The dependence of the yield on temperature is shown in Fig. 3, where I refers to 3-aminophthalimide and II refers to 3-monomethylaminophthalimide. In both cases, a fall in the yield occurs on increase of temperature from 60 to 270°C. At 220°C, the yield is 34% for I and 4.8% for II and at the same temperature when vapours are excited at a purely

rd 1/2

51-5-24/26

On the Effect of a Solvent on the Luminescence Yield.

electron frequency, the yield is 1.2% for I and 0.2% for II. Thus, the yield of the solution of I is 28 times larger than the yield of its vapour; for II the solution yield is 24 times larger than the vapour yield. The results obtained both at 220 °C and at 20 °C show that the solvent increases the fluorescence yield. This effect is due to displacement of the emission band by the solvent which materially affects quantum yield. [Refs. 8, 9].

The author thanks V.V. Zelinskiy for suggesting the investigation and A.N. Sevchenko and B.I. Stepanov for advice.

ASSOCIATION: Institute of Physics and Mathematics Ac. Sc. Belorussian SSR. (Institut Fiziki i Matematiki AN BSSR)

SUBMITTED: January 15, 1957.

AVAILABLE: Library of Congress.

Card 2/2

SOV/42-22-11-26/3

24(7)

AUTHORS: Pikulik, L. G., Solomakho, M. A.

TITLE: Temperature Dependences of the Electron Spectra in Some Phthalimides (Temperaturnyye zavisimosti elektronnykh spektrov u nekotorykh ftalimidov)

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1958, Vol 22, Nr 11, pp 1391-1394 (USSR)

ABSTRACT: Considerable displacements in the emission spectra of phthalimide solutions have been observed, if the temperature of the medium was varied from $+20^{\circ}$ to $+250^{\circ}$ (Refs 2, 3) and from $+20^{\circ}$ to -196° (Ref 4). In order to determine the causes for such considerable displacements the authors investigated the absorption- and emission spectra of some phthalimides in high-boiling solvents. The temperature influence of the medium upon the position of the band is dependent upon their initial position as determined by the respective solvent. If the temperature of the medium is raised, the phthalimide spectra may suffer a considerable displacement, if they were, with respect to their position in the vapor, much displaced previous to heating. The ef-

Card 1/3

SOV/48-22-11-24/33

Temperature Dependences of the Electron Spectra in Some Phthalimides

fectiveness of the temperature-dependent band displacement is, for a certain substance, dependent upon the position of the band at room temperature. This influence may primarily be ascribed to modifications of the influence of the solvent upon the molecule. The regularities in question only apply to a certain limited temperature range. The temperature displacement of the phthalimide spectra can be described qualitatively in the range of from $+20^{\circ}$ to -196° by a one-dimensional potential curve model. The spacing between the minima of the potential curve determines the frequency of the electron transition. A reduction of the differences between the equilibrium radii of the upper and the lower electron state correspond to a mutual displacement of the absorption- and emission lines, if the temperature of the medium is varied. The absorption maximum evidently shifts toward lower and the luminescence maximum toward higher frequencies. According to the scheme the frequency of the electron transition should remain unchanged in such a case. In order to elucidate this question further investigations are required, which should cover the absorption spectra at low temperatures and in different media. The authors express

Card 2/3

SOV/48-22-11-26,33
Temperature Dependences of the Electron Spectra in Some Phthalimides

their gratitude to V. V. Zelinskiy, A. N. Sevchenko and
B. I. Stepanov for valuable suggestions. There are 5
figures and 8 references, which are Soviet.

ASSOCIATION: Institut fiziki i matematiki Akademii nauk BSSR
(Institute of Physics and Mathematics, AS Belorussian SSR)

Card 3/3

07 Dec

PIKULIK, L.G.

Effect of the solvent on the electron spectra of phthalimides. Trudy Inst.fiz.i mat.AN BSSR no.3:162-175 '59.

(MIRA 13:4)

(Phthalimide--Spectra)

Pikulik, L. G.

S/170/60/003/008/006/014
B019/B054 82322

24.3400
5.3100

AUTHORS:

Pikulik, L. G., Solomakha, M. A

TITLE:

Investigation of the Temperature Influence on the
Luminescence- and Absorption Spectra of Complex
Molecules in Solutions

PERIODICAL:

Inzhenerno-fizicheskiy zhurnal, 1960. Vol 3, No 8,
IP 53-60

TEXT: To clarify the causes of the shift of solution spectra at low temperatures the authors investigated the absorption- and emission spectra of phthalimides and of some typical coloring materials at the temperature of liquid nitrogen. They studied liquid and solid solutions. The experimental arrangement is briefly described. The absorption- and fluorescence spectra of some phthalimides as a function of temperature represented in Fig. 3 show that the maxima of the absorption- and fluorescence bands approach one another with decreasing temperature. Table 1 shows the positions of the maxima of the bands in dependence on temperature for various solutions. Further experiments showed that not all

Card 1/3

Investigation of the Temperature Influence on the S/170/60/003/008/006/014
Luminescence- and Absorption Spectra of B019/B054 82322
Complex Molecules in Solutions

phthalimides have the same character of band shifting. In the solutions mentioned at first (Fig. 3, Table 1) the optical transparency is maintained at the change in state caused by the cooling whereas in the solutions with different character of shifting the strong fissuring exerts an influence on the change of state. Further investigations have shown that the shift of the fluorescence- and absorption spectra occurs in the direction of the electron transition frequency. This effect may be observed both with solid solutions and with liquid ones which change their state with decreasing temperature. Theoretical investigations show that the spectral shift toward the electron transition frequency is due to the change in probability of vibrational transitions of electrons. This is explained in connection with the increasing effect of the medium on the fluorescent molecule. B. I. Stepanov (Ref. 1), L. P. Kazachenko (Ref. 7), and R. V. Lel'chuk are mentioned. The authors thank A. N. Sevchenko and B. I. Stepanov, Academicians of the AS BSSR, for valuable advice, and V. V. Zelinskiy, Candidate of Chemical Sciences, for the supply of the phthalimides. There are 4 figures, 1 table, and 15 Soviet references.

Card 2/3

Investigation of the Temperature Influence on the S/170/60/003/008/006/014
Luminescence- and Absorption Spectra of B019/B054 82322
Complex Molecules in Solutions
APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012408

ASSOCIATION: Institut Fiziki AN BSSR, & Minsk (Institute of Physics
of the AS BSSR, Minsk)

SUBMITTED: July 7, 1959

Card 3/3

PIKULIK, L.G.; SOLOMAKHA, M.A.

Effect of temperature on the luminescence and absorption spectra
of complex molecules in solutions. Inzh.-fiz.zhur. no.8:
53-60 Ag '60. (MIRA 13:9)

1. Institut fiziki AN BSSR, g. Minsk.
(Luminescence) (Spectrum, Molecular)

5.3100

69839

S/051/60/008/03/010/038
E201/E191

AUTHORS: Pikulik, L.G., and Solomakho, M.A.

TITLE: On the Effect of Temperature on the Electronic Spectra
of Complex Molecules

PERIODICAL: Optika i spektroskopiya, 1960, Vol 8, Nr 3,
pp 338-341 (USSR)

ABSTRACT: The authors investigated the absorption and fluorescence spectra of a number of phthalimides and of the following dyes: acridine yellow, suramine, chrysoidine, coryphosphine, fluorescein and aminochloromaleinimide. These substances were investigated both at 20 °C and at the liquid-nitrogen temperature. Ethyl, propyl and isobutyl alcohols were used as solvents. Solid solutions based on gelatine, sugar and starch, and films with polymethylmethacrylate and nitrocellulose bases were also studied. The fluorescence spectra were recorded with a photoelectric spectrometer based on a glass monochromator UM-2; the absorption spectra were recorded with a spectrometer SF-4. The absorption and fluorescence spectra of 3-monomethylaminophthalimide and 4-aminophthalimide at 20 and -196 °C are shown in.

Card
1/2

69839

S/051/60/008/03/010/038
E201/E191

On the Effect of Temperature on the Electronic Spectra of Complex Molecules

Figs 2 and 3 respectively. It was found that in these two and in other compounds a lowering of temperature produced a displacement of the absorption and fluorescence maxima towards the frequency of a purely electronic transition. These displacements indicate a change in the probabilities of electron-vibrational transitions. This change is due to the solvent which, on lowering of temperature, interacts more strongly with the solute molecule. In absorption the relative number of transitions to the lower vibrational levels of the upper electronic state increases on lowering of temperature, and the absorption maximum is displaced towards lower frequencies; in luminescence the number of transitions to the lower vibrational levels of the ground electronic state increases with lowering of temperature and the fluorescence maximum is displaced towards higher frequencies (Fig 1).
Acknowledgements are made to A.N. Sevchenko and to B.I. Stepanov for their advice, and to V.V. Zelinskiy for the supply of the phthalimides.
There are 3 figures and 10 Soviet references.

Card
2/2

SUBMITTED:

March 10, 1959

S/048/60/024/006/020/010/XX
B013/B067

AUTHORS: Pikulik, L. G. and Sevchenko, A. N.

TITLE: Temperature Dependences of the Fluorescence ²¹Quantum Yield
of Some Phthalimides in Various Solvents

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya. 1960,
Vol. 24, No. 6, pp. 729-733

TEXT: The authors studied the temperature dependences of the fluorescence yields of some phthalimides in high-boiling solvents. The student L. Volod'ko took part in the measurements. These solvents showed a considerable shift of the spectral lines when temperature was increased. The studies were made on a photoelectric apparatus in which an YM-2 (UM-2)²² monochromator was used. A spectrophotometer of the type CP-4 (SF-4)²³ was used to study the absorptiveness of the solutions. Fig. 2 shows fluorescence spectra of 4-dimethylamino-N-methylphthalimide in various media at different temperatures. In benzyl alcohol and cyclohexanol solutions, the quantum yield is increased by an increase of temperature, whereas in dimethylphthalate solutions it is reduced. Fig. 3a shows the temperature

Card 1/4

Temperature Dependences of the Fluorescence
Quantum Yield of Some Phthalimides in
Various Solvents

S/048/60/024/006/020/030/XX
B013/B067

dependence of the quantum yield of 4-amino-N-methylphthalimide. In benzyl alcohol, glycol, and cyclohexanol, the quantum yield is increased with rising temperature. In dimethyl phthalate, a thermal extinction of fluorescence takes place. This extinction of fluorescence was qualitatively observed in those solvents which have the peaks of their fluorescence lines in the region of $20,200 \div 24,000 \text{ cm}^{-1}$. In the above-mentioned media, a similar change of the quantum yield was observed with 4-aminophthalimide. The temperature-dependent changes of the quantum yield observed may be explained by the relation $B_{\text{quant}} = f(\nu_{\text{max}}^{\text{fl}})$. According to this relation, a high value of the yield must correspond to the high value of $\nu_{\text{max}}^{\text{fl}}$ in the region of the ascending branch. A relationship between yield and spectrum was observed also in these cases where the spectrum was shifted not by the variable of the solvent but by the temperature change. With the maximum frequency of the fluorescence spectrum being shifted at 20°C toward higher frequencies, the yield is slightly increased. 3-amino-N-methylphthalimide and 4-amino-N-methylphthalimide have almost the same relations

Card 2/4

Temperature Dependences of the Fluorescence
Quantum Yield of Some Phthalimides in
Various Solvents

S/048/60/024/006/020/030/XX
B013/B067

$B_{\text{quant}} = f(\nu_{\text{max}}^{\text{fl}})$ (Fig. 1). In the former, an increase in the yield is little probable. Fig. 3b shows the temperature dependence of the quantum yield of 3-aminophthalimide. In benzyl alcohol, glycol, and cyclohexanol solutions, the peaks of the fluorescence spectrum are at 20°C in the region of $20,000 \div 20,400 \text{ cm}^{-1}$. The yield is relatively constant with rising temperature. With 3-aminophthalimide solutions in dimethylphthalate and pinene, the extinction of fluorescence at $\nu_{\text{max}}^{\text{fl}} = 21,100 \text{ cm}^{-1}$ and $\nu_{\text{max}}^{\text{fl}} = 22,000 \text{ cm}^{-1}$, respectively, is strongly marked. The duration of the excited state was measured at room temperature and above. The results are tabulated and compared with the quantum yield obtained under similar conditions. It may be seen that the relative change in the yield causes a corresponding change in the duration of the excited state. With an accuracy up to the difference of the values B/B_0 and τ/τ_0 , the processes of extinction and excitation of fluorescence observed are not due to a change of the inactive absorption. This again confirms the relationship between

Card 3/4

Temperature Dependences of the Fluorescence
Quantum Yield of Some Phthalimides in
Various Solvents

S/048/60/024/006/020/030/XX
B013/B067

the yield and the spectrum of fluorescence. The authors thank V. V. Zelin-
skiy for valuable comments, and A. M. Bonch-Bruyevich and G. A. Tishchenko
for making the fluorometric measurements possible. The present paper was
read at the Eighth Conference on Luminescence (Molecular Luminescence and
Luminescence Analysis) which took place in Minsk from October 19 to 24,
1959. There are 3 figures, 1 table, and 8 Soviet references.

ASSOCIATION: Institut fiziki Akademii nauk BSSR (Institute of Physics
of the Academy of Sciences BSSR)

Card 4/4

L 9876-66 EWT(1)/EWT(m)/T LJP(c) RM
 ACC NR: AF5027349
 SOURCE CODE: UR/0250/65/009/010/0617/0650
 AUTHOR: Gladchenko, L. F.; Kostko, M. Ya.; Fikulik, L. G.; Sevchenko, A. K.
 ORG: IFANB
 ORG: Institute of Physics AN BSSR (Institut fiziki AN BSSR)
 TITLE: Duration of the excited state of ultraviolet fluorescence of aromatic acids
 SOURCE: AN BSSR. Doklady, v. 9, no. 10, 1965, 640-650
 TOPIC TAGS: aromatization, amino acid, fluorescence
 ABSTRACT: Direct measurements of the duration of fluorescence of indole, tryptophan, glycytryptophan, tyrosine, and phenylalanine were carried out by using a phase fluorimeter of the Institute of Physics AN BSSR. The optical part of the apparatus was adapted for measurements of τ in the ultraviolet range of the spectrum. Distilled H₂O and high purity EtOH were used as solvents. Known formulas were used for calculation of the actual duration of fluorescence (τ_{act}).
 1/2

L 9876-66

ACC NR: AF5027349

Control measurements of previously known τ were in good agreement (accuracy ~ 10%) with the values given in the literature. The optical characteristics determined for the amino acids tested are given. Orig. art. has: 1 table.

SUB CODE: 07/ SUBM DATE: 22 May 65/

NR REF SOV: 002/ OTHER: 006

2/2

L 33592-66 EWT(m)/EWP(j) RM

ACC NR: AR6016186

SOURCE CODE: UR/0058/65/000/011/DO21/DO21

APPROVED FOR RELEASE: Tuesday, August 01, 2000

CIA-RDP86-00513R0012408

AUTHORS: Gladchenko, L. F.; Pikulik, L. G.; Belozarevich, N. L.

TITLE: Study of electron spectra of a series of aromatic molecules in solution

SOURCE: Ref. zh. Fizika, Abs. 11D151

REF SOURCE: Tr. Komis. po spektroskopii. AN SSSR, t. 3, vyp. 1, 1964, 319-326

TOPIC TAGS: electron spectrum, nonmetallic organic derivative, absorption spectrum, complex molecule

ABSTRACT: The authors investigated the electronic absorption and reflection spectra of a number of very simple derivatives of benzene and phthalimide in solutions at room and lower temperatures. The character of the long-wave absorption of phthalimide is analyzed on the basis of the change in the long-wave absorption band in a number of substances with different substituent groups. The Stepanov universal relation is applied to the absorption and emission spectra of frozen solutions of complex molecules. [translation of abstract]

SUB CODE: 20

Card 1/1

GLADCHENKO, L.F.; KOSTKO, M.Ya.; PIKULIK, L.G.; SEVCHENKO, A.N.

Duration of the excited state of ultraviolet fluorescence of
aromatic amino acids. Dokl. AN BSSR 9 no.10:647-650 0 '65.
(MIRA 18:12)

1. Institut fiziki AN BSSR. Submitted May 22, 1965.

I 4198-66 ENT(1)/ENT(m)/EWP(j) IJP(c) RM

ACCESSION NR: AP5013440

UR/0020/65/162/001/0057/0059

AUTHOR: ^{44, 65}Sevchenko, A. N. (Academician AN BSSR); ^{44, 65}Pikulik, L. G.; ^{44, 65}Kostko, H. Ya. ⁵⁸
⁴⁹
^{44, 65}

TITLE: Duration of fluorescence in complex molecules

SOURCE: AN SSSR. Doklady, v. 162, no. 1, 1965, 57-59

TOPIC TAGS: fluorescence spectrum, luminescence, quantum yield

ABSTRACT: The authors study the persistence of fluorescence in solutions as a spectral function of the frequency of the activating light including the anti-Stokes excitation region. Phthalimide derivatives and other organic compounds were used as study specimens. Water, alcohols and dioxane were used as solvents. A fluorometer was used with a measurement range of $2 \cdot 10^{-10}$ to 10^{-7} sec. The other equipment and the methods used in the experiment are described briefly. Special precautions were taken to reduce stray light which might fall onto the photomultiplier. The measurements were made at various concentrations depending on the intensity of the illumination. Since concentration quenching of fluorescence does not take place in phthalimides, a concentration close to saturation could be used where necessary.

Card 1/2

L 4198-66

ACCESSION NR: AP5013440

It is found that the duration of luminescence is constant throughout the entire Stokes region of the excitation spectrum. Since the duration of the excited state is proportional to quantum yield for phthalimides and dyes under ordinary conditions, these data confirm Vavilov's law on a constant quantum yield in the Stokes excitation region. A constant fluorescence duration was also observed in the anti-Stokes excitation region which indicates that quantum yield is also constant in this region. A reduction in fluorescence duration was observed in the longer-wave anti-Stokes excitation region which should be studied further in view of the sharp reduction in absorption in this region and the consequent attenuation of luminescence which affects the reliability of measurements. In conclusion, the authors are deeply grateful to V. I. Shirokov, for making the control measurements and for assistance in adjusting the fluorometer, and also to V. V. Zelinskiy for furnishing the phthalimides. Orig. art. has: 2 figures, 1 table. 44.55

ASSOCIATION: Institut fiziki Akademii nauk BSSR (Institute of Physics, Academy of Sciences, BSSR) 44.55

SUBMITTED: 23Dec64

ENCL: 00

SUB CODE: OP, GC

NO REF SOV: 007

OTHER: 000

Card 2/2 DP

PIKULIK, L.G.; GLADCHENKO, L.F.

Determining the constants of the dipole moments of excited molecules
from the temperature shift of fluorescence and absorption spectra.
Dokl. AN BSSR 8 no.10:641-644. 0 '64. (MIRA 18:3)

1. Institut fiziki AN BSSR.

GLADSTONE, L.P.:

Electron spectroscopy
pt. 1 spectra.

KORIN, M.M.; MASHENKOV, V.A.; PIKULIK, L.G.

Ultraviolet absorption spectra of the cerebrospinal fluid in
neurological patients. Dokl. AN BSSR 7 no.7:498-500 J1 '63.
(MIRA 16:10)

1. Belorusskiy nauchno-issledovatel'skiy institut nevrologii,
neyrokhirurgii i fizioterapii i Institut fiziki AN BSSR.
Predstavleno akademikom AN BSSR D.A.Markovym.

*

PIKULIK, L.G.; GLADCHENKO, L.F.

Temperature effect on the luminescence of complex molecules in
various media. Izv. AN SSSR. Ser. fiz. 27 no.6:758-762 Je
'63. (MIRA 16:7)

1. Institut fiziki AN Belorusskoy SSR.
(Molecular spectra)

L 9860-63

~~PT-1~~ ~~RR/LW/MAY/LJP(C)~~

BNP(3)/EPP(0)/EWT(1)/EWT(2)/BDS--AFFTC/ASD/ESD-3/SSD--Pc-4/

ACCESSION NR: AP3001354

8/0048/63/027/006/0758/0762

AUTHOR: Pikulik, L. G., Gladchenko, L. F.

TITLE: Influence of temperature on the luminescence of complex molecules in different media [Report of the Eleventh Conference on Luminescence held in Minsk from 10 to 15 September 1962]

SOURCE: AN SSSR. Izv. Seriya fizicheskaya, v. 27, no. 6, 1963, 758-762

TOPIC TAGS: luminescence of complex molecules, phthalimides, absorption of solutions, luminescence of solutions

ABSTRACT: Investigation of the temperature dependence of different characteristics of luminescence is important from the standpoints of elucidating the properties of fluorescing molecules and determining the nature of intermolecular interactions in condensed media. The solvents used in such investigations may be divided into two classes: those vitrifying and those crystallizing at low temperatures. In the present work there are considered the temperature dependences of a number of phthalimides in vitrifying solvents.

Card 1/3

L 9860-63

ACCESSION NR: AP3001354

4

Most of the phthalimides were identical with those investigated earlier by the authors; the solvents were ethyl and isobutyl alcohols, glycerol, n-hexane, n-octane, dioxane, ethyl ether and chlorobenzene. A major difficulty in obtaining absorption spectra stems from the fact that upon freezing the solution form a snow-like mass in which scattering is comparable to absorption; hence the absorption spectra were obtained by the method of diffuse reflection. For phthalimide and N-methylphthalimide some structure is discernible in the absorption spectra at room temperature; upon cooling, instead of becoming sharper, the structure is smeared out; no structure was observed for the other investigated phthalimides. On the basis of the temperature dependences the substances can be divided into two classes: 1) those in which both the absorption and fluorescence peaks exhibit a red shift upon cooling and 2) those in which the fluorescence changes, while the absorption spectrum remains the same. For most but not all the investigated substances the reciprocal of the polarization varies linearly with the temperature divided by the viscosity. The quantum efficiency and lifetime of the excited state appear to vary in the same way with temperature. In conclusion the authors express their gratitude to V. V. Zelinskiy and I. I. Reznikova for making the phthalimides available and I. I. Reznikova for making the phthalimides available and to V. D. Tkachev and I. L. Belayts for performing some of the measurements of the temperature dependences of the excited

Cord 2/3

L 9860-63

ACCESSION NR: AP3001354

state lifetimes and yields." Orig. art. has: 1 equation and 3 figures.

ASSOCIATION: Institut fiziki Akademii nauk BSSR (Institute of Physics, Academy of Sciences, BSSR)

SUBMITTED: 00

DATE ACQ: 01Jul63

ENCL: 00

SUB CODE: PH,CH

NR REF SOV: 014

OTHER: 001

js/nh

Card 3/3

GURINOVICH, G. P. [Hurynovich, H. P.]; PIKULIK, L. G. [Pikulik, L. H.];
SOLOV'YEV, K. M. [Salauiou, K. M.]

Anton Nikifaravich Seuchanka; on his 60th birthday. Vestsi AN
BSSR. Ser. fiz.-tekhn. nav. no. 1:124-128 '63.
(MIRA 16:4)

(Seuchanka, Anton Nikifaravich, 1903-)

GLADCHENKO, L. F. [Hladchanka, L. F.]; PIKULIK, L. G. {Pikulik, L. H.}

Study of the electron spectra of organic molecules in
scattering media. Vestsi AN BSSR, Ser. fiz.-tekh. nav. no.1:
52-58 '63. (MIRA 16:4)

(Molecular spectra)
(Organic compounds)

PIKULIK, L.G.; SNOPOK, V.N.

Fluorescence polarization of complex molecules. Dokl. AN BSSR
no.3:155-158 Mr '62. (MIRA 15:3,

1. Institut fiziki AN BSSR. Predstavleno akademikom AN BSSR
A.N.Sevchenko.

(Fluorescence) (Polarization (Light)) (Molecular spectra)

AUTHORS: Dreytser, F. F. and Pikulik, L. G.

S-250 62.006 009 002 004

1046/1246

TITLE: Theoretical analysis of the temperature shift of electron spectra of complex molecules in solutions

PERIODICAL: Akademiya nauk BSSR Doklady, v. 6, no. 9, 1962, 560-562

TEXT: McRae's theoretical conclusions concerning the effect of solvents on the electron spectra are complemented with expressions allowing for the interaction at various temperatures between the medium and a fluorescing molecule. Contrary to the theoretical results, the dependence

$$\nu_{0-0}'' - \nu_{0-0}' = f \left(\frac{\tau}{\tau + \tau_r} \right), \quad (6)$$

where ν_{0-0}' , ν_{0-0}'' — the electron transition frequencies in absorption and emission spectra, respectively τ — the average life-time of an excited molecule, τ_r — relaxation time of a polar molecule, is not linear in the general case, probably due to the failure to take the temperature dependence of ϵ and n into account. There is 1 figure.

ASSOCIATION: Institut fiziki AN BSSR (Institute of Physics, AS BSSR)

PRESENTED: By B. I. Stepanov, Academician, AS BSSR

SUBMITTED: February 17, 1962

Card 1/1

PIKULIK, L.G.; SOLOMAKHO, M.A.

Effect of temperature on the electronic spectra of complex molecules.

Opt. i spektr. 8 no.3:338-341 Mr '60.

(MIRA 14:5)

(Spectrum, Molecular)

L 20225-68 EMT(1)/EEC(b)-2 IJP(c)/SSD/ESD/SSD(c)/AFWL/ASD(a)-5/AS(wp)-2/
APGC(b)/ESD(gs)/ESD(t)
ACCESSION NR: AP5001200 8/0250/64/008/010/0641/0644

AUTHOR: Pikulik, L. G.; Gladchenko, L. F.

TITLE: Determination of the constant dipole moments of excited molecules from the temperature shift of the fluorescence and absorption spectra

SOURCE: AN BSSR. Doklady, v. 8, no. 10, 1964, 641-644

TOPIC TAGS: dipole moment, excited molecule, fluorescence spectrum, absorption spectrum, line shift

ABSTRACT: The formula used to calculate the dipole moment is

$$\nu_{00} - \nu_{00}' = \Delta\nu_{00}' = \frac{2(\mu_0 - \mu_1)^2}{hca^3} \left[\frac{s-1}{s+2} - \frac{n^2-1}{n^2+2} \right] \frac{1}{\tau + \tau'}$$

and is derived on the basis of an earlier theoretical description of the temperature shift of the electronic spectra of complex molecules in dipole solvents (E. F. Dreytser and L. G. Pikulik, DAN BSSR v. 6, 560, 1962). In this formula ν_{00} -- frequencies of the electronic transitions for absorption (a) and fluorescence (f), μ_0 and μ_1 -- constant dipole moments of the unexcited and excited

Card 1/3

L 20225-65
ACCESSION NR: AP5001200

2

molecule, respectively, ϵ -- static dielectric constant of the medium, n -- refractive index of the medium extrapolated to zero frequency, a -- parameter of the given molecule, c -- velocity of light, h -- Planck's constant, τ -- lifetime of the excited molecule, and T_r -- relaxation time of the solvent molecule. An analysis of this formula shows that the frequency difference becomes appreciable on going from low temperatures to room temperatures, owing to orientational effects. The calculations of the dipole moments by this formula were made by using data on the temperature shift of the spectra in isobutyl alcohol in the temperature range from + 20 to - 196C. The results are listed in Table I of the enclosure. The data are compared with those obtained by others and some of the causes for some of the discrepancies are discussed. "The authors thank Academician AN BSSR A. N. Sevchenko for continuous interest in the work." This report was presented by A. N. Sevchenko. Orig. art. has: 1 table and 1 formula.

ASSOCIATION: Institut fiziki AN BSSR (Institute of Physics AN BSSR)

SUBMITTED: 29Dec63

ENCL: 01

SUB CODE: OP

MR REF SOV: 008

OTHER: 003

Card 2/3

ENCLOSURE: 01

L 20223-65
ACCESSION NR: AP5001200

Table 1. Dipole moments and electron level shifts of phthalamide derivatives

Substance	$\Delta \epsilon_{\infty}^{\infty}$	$ \vec{\mu}_0 - \vec{\mu}_1 $	$\vec{\mu}_0 D$	$\vec{\mu}_1 D (\alpha = 0)$	$\vec{\mu}_1 D (\alpha = 12^\circ)$
4-acetyl-amino-N-methyl phthalamide	2500	5,2	4,6	9,8	9,5
4-amino-N-methyl-phthalamide	3800	6,3	3,6	9,9	9,7
4-aminomethyl-N-methylphthalamide	4100	6,66	3,7	10,26	10,0
4-diethyl-amino-N-methylphthalamide	5400	7,45	3,7	11,15	11,2
3-acetyl-amino-N-methylphthalamide	700	2,7	2,4	5,1	3,24*
3-amino-N-methylphthalamide	2000	4,5	2,7	7,2	7,0

* μ_1 calculated from $\alpha = 55^\circ$.

* Range of investigated temperature: $+20 \sim -190^\circ \text{C}$.

Card 3/3

APANASEVICH, P.A.; BORISEVICH, N.A.; VOLOD'KO, L.V.; GLAICHEV, L.F.;
GRISKOVSIIY, V.F.; GUMIL'OVICH, G.P.; IVANOV, A.I.; KUZNETSOVA,
V.V.; PIKULIK, L.G.; FILIPOVICH, N.A.; RUBANOV, A.S.; RUBANOV,
V.S.; SAMSON, A.M.; SARZHEVSKIY, A.M.; SLOV'YEV, K.N.;
UMREYKO, D.S.; KHAFALYUK, A.I.; YEL'YASHEVICH, M.A., akademik,
red.

[Interaction between nonequilibrium radiation and matter
Vzaimodeistvie neravnovesnogo izlucheniya s veshchestvom.
Minsk, Nauka i tekhnika, 1965. 223 p. (MIRA 18:3)]

1. Akademiya nauk SSSR. Institut fiziki. Akademiya nauk Belorusskoy SSR (for Yel'yashevich).

L 33246-65 EWT(m)/EFT(c)/EPT(n)-2/ENG(m)/EPR Pr-4/Ps-4/Pu-4 DM

ACCESSION NR: AP4012270

S/0089/64/016/001/0068/0069

AUTHOR: Konoplev, K. A.; Pikulik, R. G.

TITLE: Measurement of the temperature distribution in the reactor VVR-M shield

SOURCE: Atomnaya energiya, v. 16, no. 1, 1964, 68-69

TOPIC TAGS: reactor shield, temperature distribution, thermal column graphite, nuclear power reactor/ VVR-M reactor

ABSTRACT: The authors describe the construction of the heat shield and of the concrete shield of the VVR-M reactor and of the cooling system. The thermocouples used for temperature measurements were placed in the shield in different locations before the concrete was set. The temperature of the graphite of the thermal column was measured by a thermocouple inserted during the experiment. The temperature distribution curves have a maximum at the level of the axis of the reactor cone. On the horizontal axis the temperature drops sharply at the transition from iron to concrete. The hottest point of the iron shield is 49C.

Card 1/4

L 33246-65

ACCESSION NR: AP4012270

When the reactor power is at 10MW, the maximum temperature of the graphite of the thermal column is about 200C. "The authors are grateful to the scientific supervisor D. M. Kaminker for his help." Orig. art. has: 3 figures

ASSOCIATION: None

SUBMITTED: 05Mar83

ENCL: 02

SUB CODE: NP

NR REF SOV: 000

OTHER: 000

Card 2/4

L 33246-65

ACCESSION NR: AP4012270

ENCLOSURE: 01

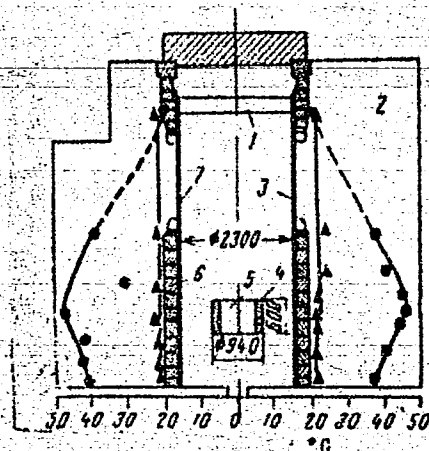


Fig. 1

Temperature distribution along elevation of reactor's heat shield - 1-water level in reactor tank; 2-biological shield (concrete); 3-air gap; 4-beryllium reflector; 5-core; 6-heat shield (cast iron); 7-reactor tank; ●-10-millivolt reactor power level; ▲-shut-down reactor.

Card 3/4

L 33246-65

ACCESSION NR: AP4012270

ENCLOSURE: 02

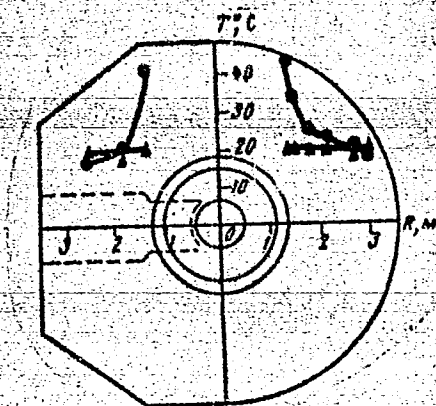


Fig. 2

Distribution of temperature T along radius R of reactor's biological shield (dotted line shows the heat column): ● - 10 millivolt reactor power level; ▲ - shut-down reactor.

Card 4/4

L 26243-66 EWA(h)/EWT(1)

ACC NR: AP6013503

SOURCE CODE: UR/0120/66/000/002/0088/0089

AUTHOR: Pikulik, V. G.; Pikulik, R. G.

ORG: Belorussian State University, Minsk (Belorusskiy gosudarstvennyy universitet)

TITLE: Transistorized generator of nanosecond pulses

SOURCE: Pribery i tekhnika eksperimenta, no. 2, 1966, 88-89

TOPIC TAGS: pulse generator, nanosecond pulse, pulse rate, HF transistor

ABSTRACT: The special feature of the described generator is that each transistor has its own dynamic bias and a common delay line. Sections of this line with the transistors form a ring system which generates pulses with identical periods. A circuit of the four-stage ring generator is shown in Fig. 1. The circuit incorporates four P406 germanium transistors operating at avalanche condition and utilizes sections of the RKZ-400 cable ($z = 400$ ohms) as a delay line. The circuit generates pulses with an amplitude of 1.5 v, a duration of 30 nanosec, and a prf of 13.5 Mc. The pulse generator may be loaded by individual loads to provide time-space distribution of output pulses. It is stated in conclusion that owing to the lack of avalanche

Card 1/2

UDC: 621.373.5

L 26243-66

ACC NR: AP6013503

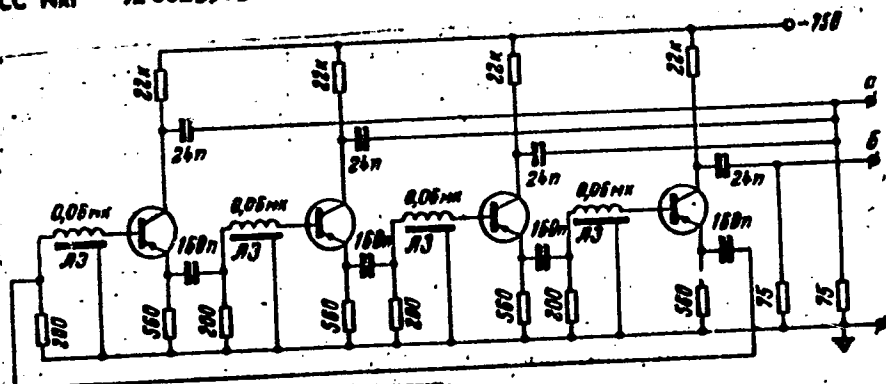


Fig. 1. Transistorized generator of nanosecond pulses

transistors in the USSR, HF germanium transistors were used. Orig. art. has: 2 figures.

SUB CODE: 09/ SUBM DATE: 12Mar65/ ORIG REF: 001/ OTH REF: 002/ ATD PRESS: 4243

[CS]

Card 2/2 CC

PIKULIN, S.A.; SHCHERBAKOV, V.A.; DONSKAYA, S.N.; GOROKHOV, L.S.

X-ray diffraction study of the phase composition of open-hearth
slags during the smelting period. Zav. lab. 30 no. 1102-
1105 '64. (MIRA 18.1)

1. Moskovskiy institut stali i splavov.

SHEKHTER, S.Ya.; REZNITSKIY, A.M.; PIKULIN, S.A.; KRUMENKO, Y.M.

automatic welding of oversize, steel pouring ladles. Avtom.svar.
18 no.1:59-60 Ja '65. (MIRA 18:3)

1. Kommunisticheskii metallurgicheskiy zavod (for Shekhter, Reznitskiy,
Pikulin). 2. Institut elektrosvarki im. Ye.O.Patona AN UkrSSR (for
Krumenko).

USSR/Engineering - Construction Methods May 52

"Vacuum Treatment of the Concrete Surfaces of an
Overflow Weir During Construction of the Tsimlyan-
skaya Hydroelectric Center," A. N. Ganzha,
S. B. Pluklik, S. G. Skvortsov, Engineers, Stalin
Prize Laureates

"Gidrotekh Stroft" No 5, pp 4-6

Describes equipment and procedure used for vacuum-
izing various portions of weir under construction.
Portable vacuum shields were used for horizontal
surface. Vacuum-chambers were incorporated into
concrete forms for vertical and inclined surfaces
230T10

more than 25%. Vacuum treatment accelerated set-
ting of concrete, increasing rate of construction
works. Vacuum concrete had dense and smooth sur-
face, and acquired better physico-mech properties.

PLUKLIK, S. B.

230T10

PIKULIK, S.S.

Morphological composition of the plant community. *Izv. Gos. nauch.-iss. inst. kurn. i fizioter. 1975. 91-101.*

Changes in the morphological composition of the plant community treated with hydrothermal radiation. *Ibid. 1976-77.*

Changes in the morphological composition of the plant community treated with artificial radiation. *Ibid. 1977-78.*

PIKULIK, S.S.

36877. C monotsitarnoy reaktsii u bol'nykh gipertonicheskoy bolezniyu.
Lechennykh fizicheskimi metodami. Trudy Uzbek. gos. Nauch.-issled.
in-ta kurortologii i fizioterapii im. Semashko, sb.11, 1969, c. 232-45

S0: Letopis' Zhurna Nykh Statey, Vol. 50, Moskva, 1949

AUTHORS: Starobinets, G. L., Pikulik, V. A.

76-32-4-3/43

TITLE: The Structure of the Adsorption Layer at the Interface Between Air and Concentrated Solution. II. (Stroyeniye adsorbtsionnogo sloya na granitse kontsentrirrovanny nevodnyy rastvor - vozdukh. II.)

PERIODICAL: Zhurnal Fizicheskoy Khimii, 1958, Vol. 32, Nr 4, pp. 756-759 (USSR)

ABSTRACT: In a previous paper it was shown that the possibility of the formation of a polymolecular adsorption layer is greatest in two cases: When the energy of the intermolecular interactions 1-2 is relatively small compared to those between 1-1 or 2-2. When the molecules of the active surface component form groups with parallel oriented dipoles. In order to investigate the first case the authors investigated in this paper the system benzene-polar derivatives of benzene (benzyl alcohol phenol, nitrobenzene and chlorobenzene) with the active benzene acting as surface component. The thermodynamic benzene activity as well as the dielectric permeability and density (at 70°C) were determined for this system by Martin (ref. 2). A table of the additional measurements of the surface tensions

Card 1/3

The Structure of the Adsorption Layer at the Interface
Between Air and Concentrated Solution. II.

76-32-4-3/43

at 70°C as well as of the calculated adsorption in the air-solution interface, and of the dielectric polarization according to Onsager-Kirkwood and of the correlation parameter of the polar component according to Kirkwood is given. From the graphically given results it can be seen that the maximum adsorption of benzene in benzyl-alcohol is abnormally great and decreases according to the series of solvents phenol-nitrobenzene-chlorobenzene. The diagrams of the thermodynamic benzene activity composition show that the deviation from the ideal case as well as the maximum quantity of benzene adsorption take place sympathetically. The abnormally great benzene adsorption is explained by the group formation of molecules of the surface-inactive components. Investigations of the correlation parameter of the polar components showed that the concentration of dimers in the system benzylalcohol-benzene is greater than in phenol-benzene, in the former the depth of the zone of negative adsorption of the polar components being greater. The distribution coefficients of benzene between the surface and the center of the solvent were calculated according to the theory by A. A. Zhukovitskiy, and were represented graphically. It is shown that the

Card 2/3

The Structure of the Adsorption Layer at the Interface
Between Air and Concentrated Solution. II.

76-32-4-3/43

adsorption layer of benzene in nitrobenzene and chloro-
benzene is monomolecular, and in phenol and benzylalcohol
polymolecular. Finally the authors state that the abnormal
properties of the adsorption layers found are to be traced
back to a polymolecular character as well as a conditioned
adsorption depth which is determined by the mean length of
the molecular groups.
There are 4 figures, 2 tables, and 5 references, 3 of
which are Soviet.

ASSOCIATION:

Belorusskiy gosudarstvennyy universitet im. V. I. Lenina
Minsk (Minsk, Belorussian State University imeni V. I.
Lenin)
May 21, 1956

SUBMITTED:

AVAILABLE:

Library of Congress

Card 3/3

1 Adsorption--Theory 2 Benzene derivatives--Adsorptive
properties 3 Benzene--Adsorptive properties

AUTHORS: Pavlyuchenko, N.M., Dubovik, N.M. et al.

TITLE: Spectrochemical determination of rare earth elements in phosphorus-containing raw materials

SOURCE: Akademia Nauk SSSR, Minsk, Institut Khimicheskoi Fiziki (Minsk), Akad. Sbornik Nauchnykh Rabot. Minsk, 1980, 4/ - 10

ABST: The present work was aimed at determining rare earths in a number of apatites and phosphorites by spectrochemical methods, as these are believed more promising than the conventional ones. For qualitative estimation, the samples were dissolved in carbon tetrachloride (1:1 ratio) and the spectra were recorded in the 4000-9000 (IR-91) spectrograph, using the 4000-4500 Å region. Experimental details are given. All the rare earths were found in the apatites and in one phosphorite, while the remaining phosphorites required chemical concentration before the spectroscopic analysis. All the lanthanons were detected. For the quantitative

Card 1/ 3

1. The first of the two main points is that

the second of the two main points is that
the third of the two main points is that
the fourth of the two main points is that

Page 1/1

L 38599-65 EWT(1)/EEC(k)-2/ENG(m)/I/EEC(b)-2/EWA(h) Pm-4/Pz-6/Peb IJP(c)

ACCESSION NR: AP5005984

S/0108/65/020/002/0052/0056

AUTHOR: Pikulik, V. G. (Active member); Shats, S. Ya. (Active member)

TITLE: Avalanche properties of industrial alloy-junction low-power transistors

SOURCE: Radiotekhnika, v. 20, no. 2, 1965, 52-56

TOPIC TAGS: transistor, alloy junction transistor, low power transistor, industrial transistor

ABSTRACT: The peculiarities of behavior of alloy transistors at high collector voltages are analyzed. The breakdown voltage and some other characteristics of P12-P407, P27-P28, P13-P16, P25-P26 transistors are tabulated. R-f types P12, P406, and P407 are recommended as most suitable for operating under avalanche conditions. Transistors with a collector-junction breakdown voltage close to the estimated average breakdown voltage U^* should be used for avalanche application. Those transistors have pronounced avalanche characteristics whose

Card 1/2

L 38599-65

ACCESSION NR: AP5005984

collector-junction breakdown develops in the center. A simple relaxation oscillator with common emitter-base may be used for avalanche-wise selecting of transistors. P101-P103 silicon transistors have very nonuniform junctions. Often they exhibit an interlinking of junctions; this trouble was also detected in some P16B and P11 transistors. Orig. art. has: 3 figures, 8 formulas, and 1 table.

ASSOCIATION: Nauchno-tehnicheskoye obshchestvo radiotekhniki i elektrosvyazi (Scientific and Technical Society of Radio Engineering and Electrocommunication)

SUBMITTED: 29Apr63

ENCL: 00

SUB CODE: EC

NO REF SOV: 003

OTHER: 001

Cord 2/2

L 26243-66 EWA(h)/EWT(1)

ACC NR: AP6013503

SOURCE CODE: UR/0120/66/000/002/0088/0089

AUTHOR: Pikulik, V. G.; Pikulik, R. G.

ORG: Belorussian State University, Minsk (Belorusskiy gosudarstvennyy universitet)

TITLE: Transistorized generator of nanosecond pulses

SOURCE: Pribory i tekhnika eksperimenta, no. 2, 1966, 88-89

TOPIC TAGS: pulse generator, nanosecond pulse, pulse rate, HF transistor

ABSTRACT: The special feature of the described generator is that each transistor has its own dynamic bias and a common delay line. Sections of this line with the transistors form a ring system which generates pulses with identical periods. A circuit of the four-stage ring generator is shown in Fig. 1. The circuit incorporates four P406 germanium transistors operating at avalanche condition and utilizes sections of the RKZ-400 cable ($z = 400$ ohms) as a delay line. The circuit generates pulses with an amplitude of 1.5 v, a duration of 30 nanosec, and a prf of 13.5 Mc. The pulse generator may be loaded by individual loads to provide time-space distribution of output pulses. It is stated in conclusion that owing to the lack of avalanche

Card 1/2

UDC: 621.373.5

L 26243-66

ACC NR: AP6013503

0

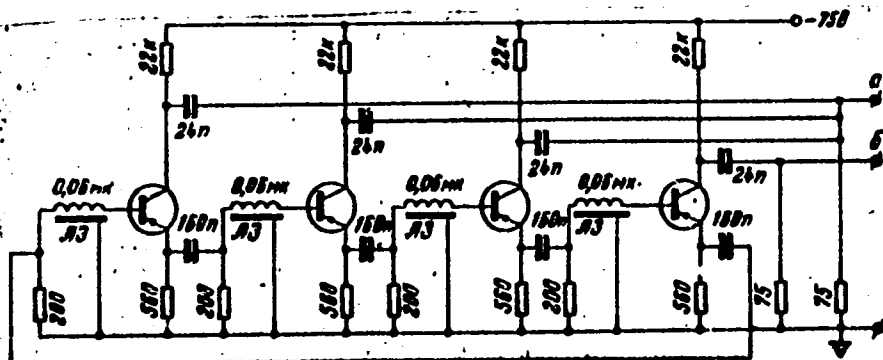


Fig. 1. Transistorized generator of nanosecond pulses

transistors in the USSR, HF germanium transistors were used. Orig. art. has: 2 figures.

[GS]

SUB CODE: 09/ SUBM DATE: 12Mar65/ ORIG REF: 001/ OTH REF: 002/ ATD PRESS:

4243

Cord 2/2 CC

PIKULIK, V.G.; SHATS, S.Ya.

Avalanche characteristics of industrial Si-P-N junction
transistors. Radiotekhnika 20 no.2:12-56 (1977) 1M1-A, 12 p.

1. Deystvitel'nyye khleny Nauchno-tekhnicheskoy
radiotekhniki i elektrosvyazi imeni P. N. Ufimtseva

ACCESSION NR: AP4037399

S/0106/64/000/005/0046/0052

AUTHOR: Pikulik, V. G.; Shats, S. Ya.

TITLE: Using the avalanche characteristics of junction transistors in pulsed devices

SOURCE: Elektrosvyaz', no. 5, 1964, 46-52

TOPIC TAGS: transistor, avalanche transistor, P406 transistor, P407 transistor, avalanche transistor pulse generator

ABSTRACT: A review of practical circuits operating with avalanche transistors (Soviet types P406 and P407) is presented. Capacitor-type 1-mc and 5-mc relaxation oscillators with pulse-repetition frequency stabilized by delay lines were tested, as well as a 3-mc slave multivibrator and a 10-microsec pulse-packet generator with a fill frequency of 1.25 mc. A number of Soviet-make transistors were tested for 5,000 hrs in a simple avalanche-relaxation-oscillator

Card 1/2

ACCESSION NR: AP4037399

circuit; no appreciable change in parameters was detected. The avalanche-transistor circuits were taken from American sources (W. Shockley, et al., Proc. IRE, 1959, v. 47, no. 6, and elsewhere). Orig. art. has: 8 figures and 8 formulas.

ASSOCIATION: none

SUBMITTED: 18Jul63

DATE ACQ: 09Jun64

ENCL: 00

SUB CODE: EC

NO REF SOV: 001

OTHER: 003

Cord 2/2

PIKULIK, V.G.; SHATS, S.Ya.

Relaxation oscillator on an avalanche transistor with grounded emitter and base. Radiotekhnika 18 no.11:57-61 N '63.

(MIRA 16:12)

1. Deystvitel'nyye chleny Nauchno-tekhnicheskogo obshchestva radiotekhniki i elektrosvyazi imeni Popova.

9.6000

S/194/61/000/010/034/082
D256/D301

AUTHOR: Pikulik, V.G.

TITLE: Transistorized multi-position multi-channel contactless commutator for switching spectra of acoustic frequencies

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 10, 1961, 4, abstract 10 V34 (Nauchno-tekhn. inform. byul. Leningr. politekhn. in-t. 1960, no. 9 45-52)

TEXT: The problems are considered of constructing a cyclic contactless commutator (CC) for switching spectra of acoustic frequencies used in pulse communication systems and computer techniques. CC consists of a set of key elements linked to the central control unit through individual control units of the key elements. With the key groups operating in sequence each CC output is successively connected to all the inputs of the CC. The basic requirement set upon

Card 1/2

Transistorized multi-position...

S/194/61/000/010/034/032
D256/D301

the CC is the correspondence of the cl. characteristic of the CC (cross, linear and nonlinear distortions) to the characteristics of mechanical commutators. The sources of possible distortions are considered and principle diagrams of separate elements are given together with circuit diagrams of the control pulse generator and the control unit with one key element - design of operating a voltage of 3 V amplitude, the time of the full cycle being 0.5 sec. There are no cross-distortions. Transistors of the П-11 (P-11) and 7-14 (P-14)-type and A-2 (D-2)-type diodes are employed. The variations of the CC output levels during operation do not exceed 10-30 mV. The working temp. ranges from -40 to +50°C. 11 figures. 3 references. [Abstracter's note: Complete translation.]

Card 2/2

PIKULIN, A.P., dotsent

Preliminary estimate of position errors for distant points of
an underground theodolite traverse. Izv. vys. ucheb. zav.; gor.
shur. no. 11:111-116 '60. (MIRA 13:12)

1. Khar'kovskiy gornyy institut, Rekomendovana kafedroy
marksheyderskogo dela Khar'kovskogo gornogo instituta.
(Mine surveying)

PIKULIN, A. P.
RYZHOV, Petr Aleksandrovich, prof., doktor tekhn.nauk; BUKRINSKIY, Viktor Aleksandrovich, dotsent, kand.tekhn.nauk; GUDKOV, Valentin Mikhaylovich, kand.tekhn.nauk; KROTOV, Gavriil Alekseyevich, dotsent, kand.tekhn.nauk; LYUBMAN, Izrail' Borisovich, assistant; RUDAKOV, Mikhail Lazarevich, prof., doktor; PIKULIN, A.P., kand. tekhn.nauk, retsenzent; BUTKEVICH, T.V., red.; PARTSEVSKIY, V.N., red.izd-va; BEKKER, O.G., tekhn.red.

[Mine surveying] Marksheiderskoe delo. Pod nauchnoi red. P.A. Ryzhova. Moskva, Gos. nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1958. 463 p. (MIRA 12:1)
(Mine surveying)

LOGVINENKO, N.V., doktor geolgo-mineralogicheskikh nauk; PIKULIN, A.P.,
otvetstvennyy redaktor; ZABRODSKIY, Kh.A., tekhnicheskiy redaktor.

[Lithology and paleogeography of the productive layer of the
Donets Basin Carboniferous] Litologiya i paleogeografiya produk-
tivnoi tolshchi donetskogo karbona. Khar'kov, Izd-vo Khar'kovskogo
gos. univ. im. A.M.Gor'kogo, 1953. 434 p. [Microfilm] (MIRA 8:2)
(Donets Basin--Geology, Stratigraphic) (Donets basin--
Paleogeography)

PIKULIN, A.P., kandidat tekhnicheskikh nauk.

Rigid polygonal adjustment by graphic methods. Trudy VNIIMI no.29:
107-115 '54. (MLRA 8:3)
(Triangulation)

PIKULIN, Saveliy Moiseyevich; INDENBAUM, V.S., redaktor; LANOVSKAYA, M.S.,
redaktor izdatel'stva; KARASEV, A.I., tekhnicheskij redaktor

[New method of laying foundations for turbine installations] Novyi
metod ustanovki na fundamente turboagregatov. Moskva, Gos. nauchno-
tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1956. 39 p.
(Turbines) (Foundations) (MIRA 9:12)

GURINOVICH, G.P.; PIKULIK, L.G.; SOLOV'YEV, L.N.

Sixth conference on luminiscence. Inzh.-fiz. zhur. no. 6:115-117
Je '58. (MIRA 11:7)

(Luminiscence)

CZECHOSLOVAKIA

SPRINGER, V., PIKULIKOVA, Z.

Department of Analytical Chemistry, Faculty of Pharmacy, Comenius University (Katedra analytickej chemie Farmaceutickej fakulty Univerzity Komenského), Bratislava

Bratislava, Pharmaceutický obzor, No 10, October 1965, pp 418-427

"Method of incineration of organic substances in a flask and its use in pharmaceutical control. Part 4: Determination of chlortetracycline and chloramphenicol."

RUTKOVSKIY, P., pensioner; KURNOSOV, M.; DROZDOV, V.; PIKULIN, P. (Gor'kiy);

We offer the following solution. Sov. profsoiuzy 7 no. 23:
37 D '59. (MIRA 12:12)

1. Tekhnicheskii inspektor Mosoblprofsoвета (for Kurnosov).
2. Instruktor Belorusskogo respublikanskogo soveta profsoyuzov
(for Drozdov).
(Labor laws and legislation)

PIKULIN, P.

Leaders in communist competition. Mashinostroitel' no.4:
40-41 Ap '60. (MIRA 13:6)

1. Predsedatel' profkoma kuzovnogo korpusa Gor'kovskogo
avtozavoda.
(Gorkiy--Automobile industry--Technological innovations)
(Socialist competition)